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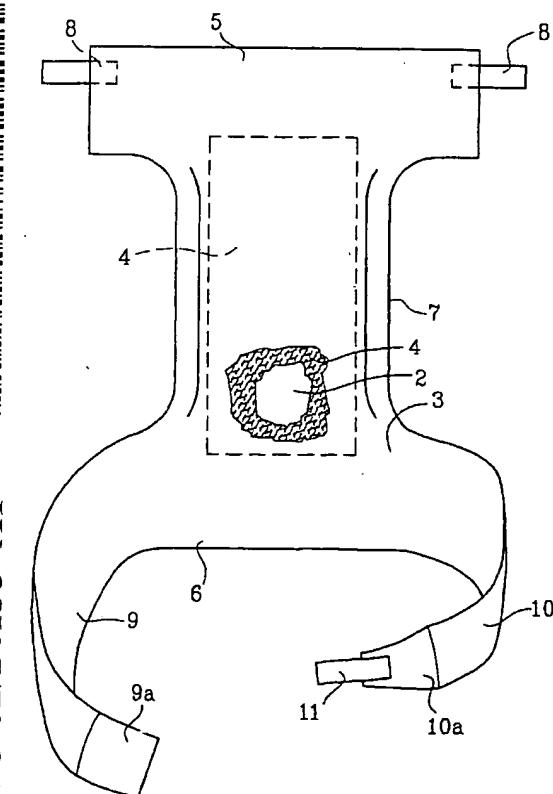
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[Continued on next page]

(54) Title: ABSORBENT ARTICLE



(57) Abstract: Absorbent article such as a diaper and an incontinence guard comprising a pair of belt portions (9, 10) attached to the rear portion (6) alternatively the front portion (5) of the article and which are intended to be fastened together around the waist of the wearer, wherein one belt portion (9) at its end carries fastening means (11) intended to be attached against the opposite belt portion (10) and where said front portion (5) alternatively the rear portion (6) is provided with fastening means (8), intended to be attached to the belt portion (9, 10), in such a way that the article will assume a pant-like shape, where the belt portions (9, 10) form a part of the waist portions of the pant. The belt portions (9, 10) are provided with at least one means for identification and distinction of the different ends of the belt portions (9a, 10a) from each other.

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CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,  
TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

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- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

## Absorbent article

### 5 *Technical field*

The present invention refers to an absorbent article such as a diaper and an incontinence guard comprising a liquid permeable topsheet, a liquid impermeable backsheet and an absorbent body enclosed therebetween, said article having a front portion, a rear portion and a crotch portion therebetween, and further is provided with a pair of belt portions attached to the rear portion alternatively the front portion of the article and which are intended to be fastened together around the waist of the wearer and where said front portion alternatively the rear portion is provided with attachment means intended to be attached to the belt portions, in such a way that the article will assume a pantlike shape, where the belt portions form a part of the waist portions of the pant.

15

### *Background of the invention*

Diapers and incontinence guards for incontinent adults usually have a garment portion holding an absorbent body in place against the user's body and attachment means which hold the garment portion in place also when the user is moving. A common type of attachment means are adhesive tapes or hook and loop fasteners of the touch-and-close type which directly attach the front and rear portions of the absorbent article to each other. It is further known, through e.g., EP-A-0 287 388, EP-A-0 409 307, EP-A-0 528 282, EP-A-0 605 012 and FR-A-2 586 558, to attach the front and rear portions of the article by means of a belt, at which the possibilities to adjust the fit are improved. The belt further provides a simplified change of diaper or incontinence guard, especially when the patient is standing up.

On a common type of belt diaper the belt portions are first attached around the waist on the patient and then the front portion of the diaper is attached to the outside of the belt using fastening means such as hook and loop fasteners, tape tabs, etc. being arranged at front portion and /or the belt. Usually the hook material of the hook and loop fasteners or the

tape tabs are arranged on the front portion, whilst the outside portions of the belt functions as reception surface for these means. The belt portions are folded together with the rest of the product as a package before usage. One problem is that for elderly people or persons having a weak sight capability or when there are bad light conditions, it may be difficult to

5 identify the different parts of the diaper and to understand how the diaper is to be applied on the body from a folded belted product. On hospitals, in elderly care or the like, the products usually are being stored without wrapping material. Thus, there is no easily available instruction showing the user how to apply the product. It would therefore be desirable to be able to provide a diaper or incontinence guard which more intuitively and in

10 a self-instructing way shows how to apply the product.

*Summary of the invention*

The object of the present invention is to provide a diaper or incontinence guard, guiding the user how to apply the product. This object is being solved by providing the ends of the

15 belt portions with at least one means for identification and distinction of the different ends of the belt portions from each other. According to a preferred embodiment the end carrying the fastening means is more narrow than the corresponding end of the other belt portion. Said means may alternatively or as a complement include a colour difference between the ends of the belt portions and against the rest of the belt portions respectively. This would

20 facilitate for persons having weaker eyesight or at bad light conditions

*Short description of drawings*

The invention will in the following be closer described with reference to an embodiment shown in the accompanying drawings.

25 Fig. 1 shows schematically a perspective view of a diaper or incontinence guard according to the invention.

Fig. 2a and 2b show additional examples of different belt ends on a diaper according to Fig. 1.

*Description of an embodiment*

The drawing shows an embodiment of a diaper or incontinence guard 1 comprising a liquid impermeable backsheet 2, a liquid permeable topsheet 3 and an absorbent body 4 enclosed therebetween. The liquid permeable topsheet 3 can consist of a nonwoven material, e.g., a

5 spunbond material of continuous filaments, a meltblown material, a bonded carded fibrous web or a perforated plastic film. The liquid impermeable backsheet 2 may consist of a plastic film, a nonwoven material coated with a liquid impervious material or a hydrophobic nonwoven material which resists liquid penetration.

10 The topsheet 3 and the backsheet material 2 have a somewhat greater extension in the plane than the absorbent body 4 and extend outside the edges thereof. The layers 2 and 3 are connected to each other within the projecting portions thereof, e.g., by gluing or welding by heat or ultrasonic.

15 The absorbent body 4 can be of any conventional kind. Examples of commonly occurring absorbent materials are cellulosic fluff pulp, tissue layers, highly absorbent polymers (so called superabsorbents), absorbent foam materials, absorbent nonwovens or the like. It is common to combine cellulosic fluff pulp with superabsorbents in an absorbent body. It is also common to have absorbent bodies comprising layers of different material with

20 different properties with respect to liquid acquisition capacity, liquid distribution capacity and storage capacity. It is well-known to the person skilled in the art and does therefore not have to be described in detail. The thin absorbent bodies which are common in for example baby diapers and incontinence guards often comprise a compressed mixed or layered structure of cellulosic fluff pulp and superabsorbent.

25 The diaper/incontinence guard is intended to enclose the lower part of the wearer's trunk like a pair of absorbent pants. It comprises a front portion 5 intended during use to be worn on the front part of the user's body, a rear portion 6 intended during use to be worn on the rear part of the user's body, and a more narrow crotch portion 7 located between the front

30 and rear portions and which is intended to be worn in the crotch part of the user between

the legs. The front portion 5 exhibits a pair of tape tabs 8 or another type of fastening means such as hook and loop fasteners.

A pair of belt portions 9 and 10 are with one end attached, e. g., glued or ultrasonically 5 welded, to the rear portion 6 of the diaper. The belt portions 9, 10 are with their opposite ends intended to be fastened together, e. g. by means of a tape tab 11 which is attached against the outside of the opposite belt portion. Instead of tape tabs any optional fastening means may be used such as hook and loop fasteners. The tape tabs 8 of the front portion 5 are intended to be attached against the outside portions of the belt portions 9, 10 in order to 10 fasten together the diaper/incontinence guard to the desired pantlike shape.

According to an alternative embodiment the belt portions are attached to the front portion 5 of the diaper and thus are intended to be fastened together on the back of the wearer. The fastening means 8 are then arranged on the rear portion 6 of the diaper.

15

The width of the belt portions 9 should be between 5-20 cm, preferably between 7-15 cm.

The belt portions 9, 10 are preferably a laminate of a carrier material, which forms the outside of the belt, and a soft nonwoven, which forms the inside of the belt intended to be 20 in direct contact with the skin of the user. A suitable nonwoven material can be a spunbond material of e.g., polypropylene- or polyethylene fibres. Conjugate fibres may also be used. Another suitable nonwoven material can be a carded thermobonded material of e.g., polypropylene-, polyester- or conjugate fibres. As carrier material may a plastic film be used or another suitable material e.g., nonwoven. The carrier material should be adapted to 25 function as a reception surface for both the attachment means 8 and 11, wherein in those cases other types of fastening means is used instead of tape tabs, e.g., hook and loop fasteners, another kind of carrier material may be appropriate, especially a nonwoven material. Also elastic laminates are suitable to use as material in the belt portions. The ends of the belt portions 9, 10 are denoted 9a and 10a, respectively.

30

When the belt diaper is to be used, it is unfolded from its folded state and the belt portions 9, 10 are unfolded. In order to in a more intuitive and self-instructing way, guide the user how to use the belt diaper, is it important that the user easily by using eyesight or sense, is able to determine where the ends are in order to more easily grasp them. Both end of the 5 belt portions should also be distinguished from each other, as to estimate which belt portion is to be applied on top of the other. This facilitates for persons having weaker eyesight or during application at bad light conditions. The ends of the belt portions are therefore designed with means for identification and to distinguish the different ends 9a, 10a of the belt portions 9, 10 from each other.

10

This means may include a geometric difference between the ends of the belt portions, whereby it is possible to using the sense in the finger tips as well as the eye sight identify where the ends of the belt portions 9a, 10a are, partly to more easily be able to grasp them and partly be able to distinguish them from each other. One end of a belt portion, usually 15 the right one, carries fastening means 11 and is therefore intended to be applied on top of the opposite end of a belt portion, usually the left one. Analogously with an ordinary waist belt, where the end which is to be placed on the outside of the other one exhibits a tapering shape, one may design the end of a belt portion 10a carrying the fastening means 11 more narrow whilst the opposite end of a belt portion 9a is broader with a blunt end. The user 20 will hereby intuitively place the belt portions 9, 10 in a correct mode, i. e., with the part exhibiting the broader end 9a beneath.

Alternatively or as a complement to this geometric shape difference, the ends of the belt portions may be provided with distinguishing colours, partly to be able to distinguish the 25 ends of the belt portions 9a, 10a and partly distinguish them from the rest of the belt portions in order to more easily be able to find the ends. This colour may be conspicuous or even fluorescent in order to readily identify the ends of the belt portions 9a, 10a.

The invention is of course not limited to the above described embodiment but can be 30 modified within the scope of the claims.

**Claims**

1. Absorbent article such as a diaper and an incontinence guard comprising a liquid permeable topsheet (3), a liquid impermeable backsheet (2) and an absorbent body (4) enclosed therebetween, said article having a front portion (5), a rear portion (6) and a crotch portion (7) therebetween, and further is provided with a pair of belt portions (9,10) attached to the rear portion (6) alternatively the front portion (5) of the article and which are intended to be fastened together around the waist of the wearer, wherein one belt portion (9) at its end carries fastening means (11) intended to be attached against the opposite belt portion (10) and where said front portion (5) alternatively the rear portion (6) is provided with fastening means (8) intended to be attached to the belt portions (9, 10), in such a way that the article will assume a pantlike shape, where the belt portions (9, 10) form a part of the waist portions of the pant,  
15 **characterized in,**  
that said belt portions (9, 10) are provided with at least one means for identification and distinction of the different ends of the belt portions (9a, 10a) from each other.
- 20 2. Absorbent article according to claim 1,  
**characterized in,**  
that said means for identification include a geometric difference between the ends (9a, 10a) of the belt portions (9, 10).
- 25 3. Absorbent article according to claim 1 or 2,  
**characterized in,**  
that the end (10a) of that belt portion (10) carrying the fastening means is more narrow than the end (9a) of the opposite belt portion (9).

4. Absorbent article according to any of the preceding claims,  
**characterized in,**  
that said means for identification include a colour difference between the ends  
(9a, 10a) of the belt portions (9, 10) and against the rest of the belt portions,  
5 respectively.

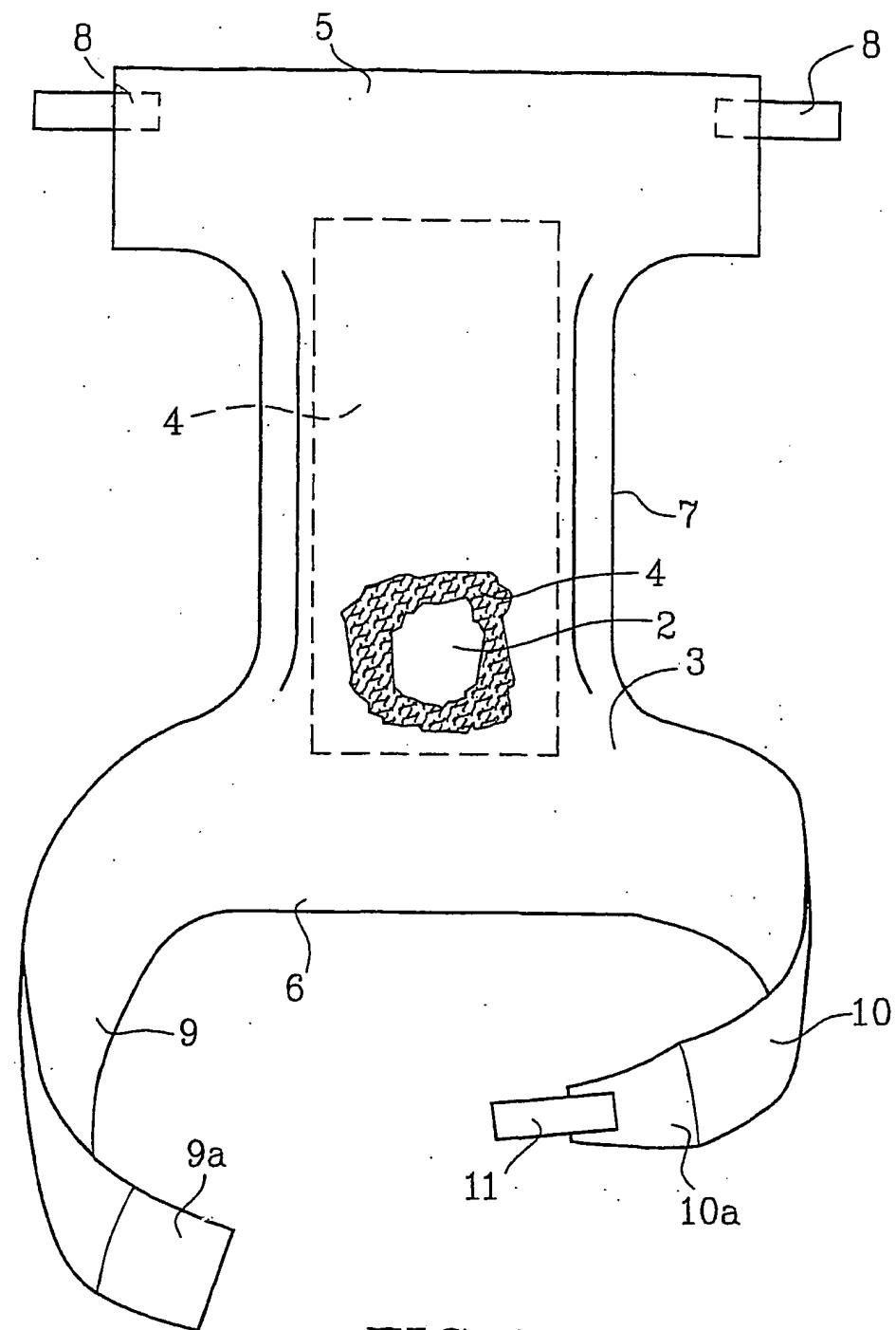


FIG.1

2/2

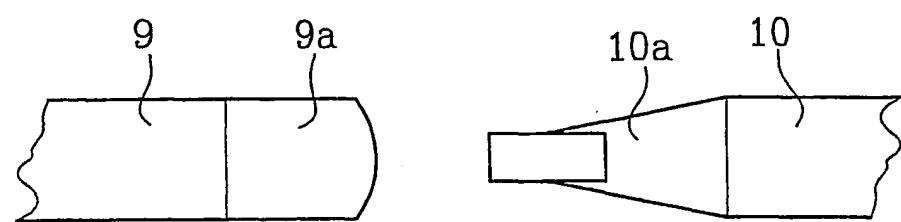


FIG. 2a

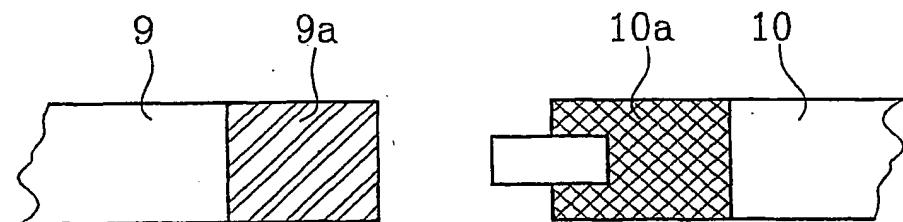


FIG. 2b

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 01/01948

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: A61F 13/064

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: A41B, A41D, A41F, A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## EPO-INTERNAL, WPI, DATA

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Date of the actual completion of the international search	Date of mailing of the international search report
18 February 2002	22-02-2002
Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. +46 8 666 02 86	Authorized officer  Per Renström/EÖ Telephone No. +46 8 782 25 00

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